EtherChannel and STP

Objectives

- Configure and wire up a port-channel (Etherchannel)
- Tweak STP to favor one VLAN on one leg over another
- Set your switch to use Rapid PVST before you proceed

EtherChannel

- Wire up two NEW ethernet cables to the uplink switch documented on the equipment page.
- Make sure and keep it clean when wiring!!
- Use the ports designated on the equipment page.
- Configure your EtherChannel on these two ports using LACP.
- Trunk the same VLANs as you have on the original uplink, across this new EtherChannel.
- You will NOT be using the NATIVE vlan on this EtherChannel, everything is trunked like normal.
- Make sure it is synced up and working ({\textit{show etherchannel <id> detail}})

STP Config

- Configure your Switch for rapid per-vlan STP
- Force the STP Cost of one of your VM VLANs across the new EtherChannel and the other VM VLAN to come across the single-cable uplink. (you might have to modify the cost of the VLANs on BOTH ports)
- Do the same with your Uplink (VLAN 1XX) VLAN (make sure it traverses the PortChannel link instead of F1/0/X link)
- Set your ports going to your routers to portfast ports. If the port is a trunk, set it to {\textit{portfast trunk}}
- Forcefully make your 3750 the {\textit{root primary}} for your TWO 2800-only VLANs (these are the two 3750 to 2800 VLANs you run OSPF on, NOT the VM VLANs)

Verification

- Copy the output from {\textit{show etherchannel <number> summary}} for verification uploading
- Grab a copy of {\textit{show spanning-tree interface FaX/y}} for your OLD single cable uplink port (root for ONE VM should be using this port)
- Do the same for your EtherChannel port to compare against it (your Uplink and ONE VM VLAN should be connecting to root from here).
- Then, shut down your OLD uplink port and wait for STP to adjust (you should still be able to get out if you set it up right)
- Get the same {\textit{show spanning-tree int <ether_channel>}} output from above, showing the changes.
- {\textit{no shut}} your OLD uplink port so things flow back the way they were.
- {\textit{shutdown}} your NEW EtherChannel port
- Grab another {\textit{show spanning-tree int FaX/Y}} of your OLD uplink port once STP has adjusted to show the changes.
- Bring the NEW Etherchannel back up.

To pass off

- Upload the verification steps from above to Canvas by the due-date and time listed in Canvas
- Also upload a copy of your show-run from each of your devices, each in its own text file